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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/670,408	09/25/2003	Xiaolan Ai	TIMK 8497US	5738

1688 7590 08/25/2005

POLSTER, LIEDER, WOODRUFF & LUCCHESI
12412 POWERSCOURT DRIVE SUITE 200
ST. LOUIS, MO 63131-3615

EXAMINER

LE, DAVID D

ART UNIT	PAPER NUMBER
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3681

DATE MAILED: 08/25/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/670,408

Applicant(s)

AI, XIAOLAN

Examiner

David D. Le

Art Unit

3681

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 August 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 and 8-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 10 is/are allowed.
- 6) ☒ Claim(s) 1-6, 8, 9, 11 and 13-19 is/are rejected.
- 7) ☒ Claim(s) 12 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____

DETAILED ACTION

1. This is the third Office action on the merits of Application No. 10/670,408, filed on 25 September 2003. Claims 1-6 and 8-19 are pending.

Documents

2. The following documents have been received and filed as part of the patent application:
 - Information Disclosure Statement, received on 12/29/03
 - Information Disclosure Statement, received on 03/19/04

Continued Examination Under 37 CFR 1.114

3. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 27 July 2005 has been entered.

Claim Objections

4. Claim 9 is objected to because of the following informalities:
 - Lines 2-3 of claim 9 recite "fixed a support shaft", which should have been --the fixed support shaft--.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. **Claims 1-6, 8-9, and 13-19 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.**

Claims 1-6:

- Claim 1 recites the limitation "the maximum available friction coefficient μ ".
There is insufficient antecedent basis for this limitation in the claim.
- Claim 4 recites the limitation "a supporting force". It is unclear whether this limitation is different from the one, which is first recited on lines 2-3 of claim 2.

Claims 8-9:

- Claim 8 recites the limitation "the maximum available friction coefficient μ ".
There is insufficient antecedent basis for this limitation in the claim.

Claims 13-19:

- Claims 13, 15, 16, 18 and 19 recite the limitation "the maximum available friction coefficient μ ". There is insufficient antecedent basis for this limitation in these claims.
- Claim 15 recites the limitation "a flexible mounting". It is unclear whether this limitation is different from the one, which is first recited on line 5 of claim 13.

- Claim 15 recites the limitation "the operating friction coefficient μ_0 ". There is insufficient antecedent basis for this limitation in these claims.
- Claim 18 recites the limitation "a flexible mounting". It is unclear whether this limitation is different from the one, which is first recited on line 5 of claim 16.
- Claim 18 recites the limitation "the operating friction coefficient μ_0 ". There is insufficient antecedent basis for this limitation in these claims.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. **Claims 8-9, 11, 13, 15-16, and 18 are rejected under 35 U.S.C. 102(b) as being anticipated by U. S. Patent No. 3,945,270 to Nelson et al.**

Claims 8-9, 11, 13, 15-16, and 18:

Nelson (i.e., Figs. 1-6; column 5, line 19 – column 11, line 52) discloses a friction drive transmission comprising:

- A plurality of planetary rollers (9, 10, 11) positioned between and in frictional contact with an outer ring member (8) and a sun roller member (6) of a planetary traction drive such as to communicate rotational motion between the outer ring member and the sun roller member;

- Wherein each of the planetary roller includes a means for flexibly mounting having a support shaft (34, 35, or 36), an elastic spring (45) inserted in the planetary roller, and a bearing (33) such that the means biases a center of the planetary roller towards a center of the support shaft, thereby pushing and pulling the planetary roller into and out of a convergent wedge;
- Wherein the means for flexibly mounting inherently generates an effective supporting stiffness of the planetary roller and an effective contact stiffness at a contact point where the planetary roller contacts the sun roller member and at a contact point where the planetary roller contacts the outer ring member;
- Wherein the roller includes the flexible mounting with a predetermined travel range that limits the operating friction coefficient at or close to a maximum available friction coefficient (i.e., column 10, line 1 – column 11, line 52).

Allowable Subject Matter

9. Claim 10 is allowed.

10. Claim 12 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

11. Claims 1 and 19 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action.

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12. Claims 2-6, 14, and 17 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Response to Arguments

13. Applicant's arguments with respect to claims 1-6 and 8-19 have been considered but are moot in view of the new interpretations of the previous ground(s) of rejection, as set forth above.

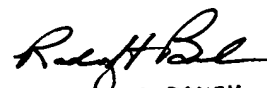
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David D. Le whose telephone number is 571-272-7092. The examiner can normally be reached on Mon-Fri (0700-1530).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles A. Marmor can be reached on 571-272-7095. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


ddl


RODNEY H. BONCK
PRIMARY EXAMINER
ART UNIT 3681